HONORS AND ENRICHMENT PROGRAMS PROUDLY PRESENTS

2022 STEM SCHOLAR SENIOR SHOWCASE

Program of Events

UNIVERSITY OF CONNECTICUT
STUDENT UNION THEATER
APRIL 20, 2022 | 5PM

https://honors.uconn.edu/stem-scholar-senior-showcase-2022/

PROGRAM

5:00 PM

Welcome Message
by Dr. Coral Fernandez-Illescas
Honors STEM Scholar Advisor

5:10 PM

Dr. Jennifer Lease Butts
Associate Vice Provost for
Enrichment Programs, Director of the
Honors Program

5:20 PM

STEM Scholar Pitches - Group 1

5:40 PM

STEM Scholar Pitches - Group 2

6:00 PM

STEM Scholar Community Highlights

6:05 PM

STEM Scholar Pitches - Group 3

6:25 PM

STEM Scholar Pitches - Group 4

6:45 PM

STEM Scholar Pitches - Group 5

6:55 PM

Closing Remarks
by Dr. Coral Fernandez-Illescas
Honors STEM Scholar Advisor

PITCH GROUP 1

MOHSIN MIRZA

Evaluating Antimicrobial Surface Modifications With Quaternary Ammonium Compounds on Industry Materials

MEHREEN PASHA

When Problems Become Solutions: Harnessing the Osteogenic Capacity of Disease-Causing Stem Cells to Repair Bone Fractures

REINIER A. GONZÁLEZ HEREDIA

Structure, Regulation and Function of VISTA as a novel immunotherapy ligand

CALLISTA LAJEUNE

Comparing SARS-CoV-2 Antibody Tests from Quest Diagnostics and Jackson Laboratories Utilized to Identify MIS-C Patients

RANITA MURIEL

Injuries Sustained by Pediatric Motor Vehicle Accident Victims

ROSHNI MEHTA

Who Let the DoGs Out? An Analysis of RNA Transcription Readthrough and Termination

MARISSA ALBA NACLERIO

Tracking Changes in Greenness in a Mangrove Forest Following Hurricane Irma in the Florida Everglades

PITCH GROUP 1 CONTINUED

JESSICA BERRY

Maternal Perceptions Regarding Care of their Infants with Neonatal Abstinence Syndrome

TAWANA GRAY

Diabetic persons experiencing homelessness admitted to a medical respite program

CAMERON CIANCI

Lattice Chiral Effective Theory

NICOLE KHUSID

Multimessenger Gravitational Wave Signals from Strongly Lensed Supermassive Black Hole Binaries

PITCH GROUP 2

ASHLEY KOVACH

The Atypical Antipsychotic Cariprazine Induced Motivational Impairments in an Animal Model of Avolition: Implications for the Treatment of Schizophrenia

ARNAV SHARMA

Exploring the Frontiers of Nanopore Sequencing in Food Safety

ADITI SIRSIKAR

Screening for Depression in Young Adults with Autism Spectrum Disorder

BHAVANA GUNDA

Investigating the Role of SNRNP70 in the Splicing and Expression of Minor Intron-Containing Genes

QINGLI HU

Case Study: Effects of Ultrasonic Vocalizations on Rat Behavior and Place Cell Remapping in the Hippocampus

MALAVIKA MADAN

Drug Delivery Systems of Glioblastoma Multiforme

SUCIKA PERUMALLA

Behavioral Response to Changing Emotional Environment: Effects of Dorsal Hippocampus Inactivation

PITCH GROUP 2 CONTINUED

SHREYA SREENIVAS

Using Co-occurrence Analysis to Explain How Researchers Study Emotional Well-Being

SABAA FAYAZI

Neurophysiology of Sleep

AMISHA PAUL

Understanding Ventricular-Subventricular Zone Development: Neural Stem Cell Lineage Tracing and Structural Configuration Modeling

JAMIE MASTHAY

Characterization of the Catecholamine Uptake Inhibitor Bupropion and the Opioid Antagonist Naltrexone, Alone and in Combination, on Binge-Like Eating Behavior

SAMANTHA BALLAS

The Importance of Health Anxiety And Emotional Reasoning to Understand Vaccine Hesitancy and Safety Behaviors: Implications for Public Health Campaigns in a COVID_19 Era

PITCH GROUP 3

JULIA QUINN

Determination of the Timing of Post-Mitotic Read-through Transcription by RNA Polymerase II

KHALEEL RAHMAN

Can Satire Impact Sustainability Perceptions Among Undergraduates?

NATHAN SCHAUMBURGER

Exploring the Mechanisms of Anthocyanin Patterning Development in Mimulus Parishii

NAILAH HUTCHINSON

Modeling Tools for NBA Data: An Analysis of Certain Measures to Determine a NBA Team's Overall Performance

MANSI DHOND

A Novel Combination of Seaweed Farming and Aquaculture to Maximize Carbon Sequestration and Promote Food Sustainability

JONATHAN RUCINSKI

Analysis of Flow Stress Data of Ti-6Al-4V for Application in Simulations

DANIEL SIMMONS

Additive Manufacturing and Mechanical Evaluation of Fiber-Reinforced Structures

PITCH GROUP 3 CONTINUED

NATHAN WETHERELL

Optimization of Orbital Trajectories Using NeuroEvolution of Augmenting Topologies

ANDREW CHRISTENSON

Utilizing Computational and Experimental Methods to Evaluate the Biomechanics of Heading in Soccer

CHRIS JOHN

Triggering Thermal Runaway in Lithium-ion Batteries

RACHIT KUMBALAPARAMBIL

Inverted Pendulum Sensors and Mechanical Components Analysis

PITCH GROUP 4

SAUMYA SHAH

Alterations of the gut mycobiome in patients with multiple sclerosis: a bioinformatic approach

NEHA ANDE

Image Recognition Using a Siamese Neural Network

ADITI DUBEY

Predicting The Political Polarity Of Twitters Regarding Vaccine Passports

ADITYA DUBEY

A Machine Learning and Deep Learning Framework for Binary, Ternary, and Multiclass Emotion Classification of Covid-19 Vaccine-Related Tweets

JACOB LENES

The assistance of Applied Introduction to Cryptography, as well as Cyber Security Academia

ANUSHA NAGELLA

Detecting Depression Dialogue on Twitter

CHLOÉ BECQUEY

A Deep Learning Approach to Detecting Breast Cancer from Mammograms

PITCH GROUP 4 CONTINUED

RAJVI PARIKH

Spotlight on Defibrotide Sodium as a Treatment Option for Adults with Hepatic VOD: Design, Development, and Place in Therapy

MITCHELL JOHNSON

Smart, Efficient and Light Solar Microgrid Inverter

GARRETT ZEILINGER

Viability of Bidirectional Wireless Power Transfer with Application to Unmanned Underwater Vehicle Battery Systems

PITCH GROUP 5

LAVAR JOHNSON

Feasibility and Usefulness of Evidence-Based Gaming to Deliver Health Messages to Tweens in a Classroom Setting.

MEHAK SHARMA

A Narrative Review: Pharmacy Intervention Fidelity

ERIC ZEIBERG

3D Esophageal Model for Testing Novel Surgical Stapling Technology

LING CHI

Device and Mobile App Development for Retinal Diagnosis

JENNIFER FIELD

A Human Factors Approach to the Optimization of Prostheses for K3 and K4 Amputees

BRADLEY STUTZMAN

Surrogate Modeling of Chemical Processes using Optimal Neural Network Structures

CAT ODENDAHL

Designing an Improved Artificial Reef-Ball to Mediate Shoreline Erosion

PITCH GROUP 5 CONTINUED

NINA HUCZKO

Multi-Layered Stimuli-Responsive Dynamic Shape Change Device

EMILIE KAROVIC

Verification of IRF8 Transcript Isoform Switching Due to CLL-Associated Enhancer SNP